STIC Search Report
EIC 2100

USPTO

TO: Brian R Peugh **Location: RND 2A61** **Art Unit : 2187** **Thursday, May 05, 2005** **Case Serial Number: 10/075514**	**From: David Holloway** **Location: EIC 2100** **RND 4B19** **Phone: 2-3528** **david.holloway@uspto.gov**

Search Notes

Dear Examiner Peugh,

Attached please find your search results for above-referenced case.
Please contact me if you have any questions or would like a re-focused search.
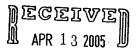
David

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Search and Information
Resources Administration

SEARCH REQUEST FORM

Scientific and Technical Information Center

(47)

ster's Full Name: Brian R. Peryl   Examiner # : 77021   Date: 4/12/05

iit: 2187   Phone Number 30-2-4199   Serial Number: 10/075 514

3ox and Bldg/Room Location: _____ Results Format Preferred (circle): PAPER DISK E-MAIL

e than one search is submitted, please prioritize searches in order of need.

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rovide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or f the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if Please attach a copy of the cover sheet, pertinent claims, and abstract.

f Invention: Efficient Service Management in home gateways

ors (please provide full names): See attached

t Priority Filing Date: 2/13/02

quence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the ate serial number.

-me (Service) Gateway
-r claim 1
    └ Keywords underlined
    └ Bracketed area most important feature of claim

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BY: ....

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'USE ONLY   **Type of Search**   **Vendors and cost where applicable**

David Holley   NA Sequence (#) _____   STN _____

ione #: 2-3528   AA Sequence (#) _____   Dialog ✓ _____

cation: RND 4819   Structure (#) _____   Questel/Orbit _____

er Picked Up: 5-5-05   Bibliographic ✓   Dr.Link _____

leted: 5-5-05   Litigation _____   Lexis/Nexis _____

ep & Review Time: 65   Fulltext ✓   Sequence Systems _____

p Time: _____   Patent Family _____   WWW/Internet ✓ _____

e: 165   Other _____   Other (specify) _____

0 (8-01)

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Set      Items    Description
S1          48    AU=(KAMEL I? OR KAMEL, I?)
S2           6    AU=(ELBASSIONI K? OR ELBASSIONI, K?)
S3        1816    AU=(CHEN B? OR CHEN, B?)
S4           3    S1 AND S2 AND S3
S5          21    (S1 OR S2 OR S3) AND IC=G06F-012
S6          23    S4 OR S5
S7          23    IDPAT (sorted in duplicate/non-duplicate order)
S8          17    IDPAT (primary/non-duplicate records only)
File 344:Chinese Patents Abs Aug 1985-2004/May
         (c) 2004 European Patent Office
File 347:JAPIO Nov 1976-2004/Dec(Updated 050405)
         (c) 2005 JPO & JAPIO
File 348:EUROPEAN PATENTS 1978-2005/Apr W04
         (c) 2005 European Patent Office
File 349:PCT FULLTEXT 1979-2005/UB=20050428,UT=20050421
         (c) 2005 WIPO/Univentio
File 350:Derwent WPIX 1963-2005/UD,UM &UP=200527
         (c) 2005  Thomson Derwent
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015282278   **Image available**
WPI Acc No: 2003-343210/200332
XRPX Acc No: N03-274573
   **Managing memory resource in service gateway environment by building
   dynamic programming table for service instances to indicate achievable
   memory space**
Patent Assignee: MATSUSHITA ELECTRIC IND CO LTD (MATU); CHEN B (CHEN-I);
   ELBASSIONI K (ELBA-I); KAMEL I (KAME-I)
Inventor: **CHEN B ; ELBASSIONI K ; KAMEL I**
Number of Countries: 102 Number of Patents: 005
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200332183	A2	20030417	WO 2002US32538	A	20021011	200332	B
US 20030154356	A1	20030814	US 200275514	A	20020213	200355	
EP 1442382	A2	20040804	EP 2002801033	A	20021011	200451	
			WO 2002US32538	A	20021011		
AU 2002334973	A1	20030422	AU 2002334973	A	20021011	200461	
JP 2005505832	W	20050224	WO 2002US32538	A	20021011	200516	
			JP 2003535080	A	20021011		

Priority Applications (No Type Date): US 200275514 A 20020213; US
   2001329219 P 20011012
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200332183	A2	E	21	G06F-015/16	

   Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA
   CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN
   IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ
   OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VC VN
   YU ZA ZM ZW
   Designated States (Regional): AT BE BG CH CY CZ DE DK EA EE ES FI FR GB
   GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SK SL SZ TR TZ UG ZM ZW

| US 20030154356 | A1 | | | G06F-012/00 | |
| EP 1442382 | A2 | E | | G06F-015/16 | Based on patent WO 200332183 |

   Designated States (Regional): AL AT BE BG CH CY CZ DE DK EE ES FI FR GB
   GR IE IT LI LT LU LV MC MK NL PT RO SE SI SK TR

| AU 2002334973 | A1 | | | G06F-015/16 | Based on patent WO 200332183 |
| JP 2005505832 | W | | 39 | G06F-009/46 | Based on patent WO 200332183 |

Abstract (Basic): WO 200332183 A2
      NOVELTY - Method consists in receiving a service request having an
   associated memory space requirement exceeding total available memory
   space associated with the gateway environment, determining the number
   of dependent service instances for each service instance, determining
   an accumulative memory space requirement for each service instance, and
   identifying a subset of service instance whose memory space requirement
   exceeds that of the service request: The identified subset of service
   instances is deleted and a ratio for each instance is determined as the
   accumulative memory space requirement divided by the number of
   dependent service instances to select the instance with the largest
   ratio.
      USE - Method is for managing application services in a limited
   memory environment such as a home gateway.
      ADVANTAGE - Method is efficient.
      DESCRIPTION OF DRAWING(S) - The figure shows a flow chart for
   memory resource management.
      pp; 21 DwgNo 3/6
Title Terms: MANAGE; MEMORY; RESOURCE; SERVICE; GATEWAY; ENVIRONMENT; BUILD
   ; DYNAMIC; PROGRAM; TABLE; SERVICE; INSTANCE; INDICATE; ACHIEVE; MEMORY;
   SPACE
Derwent Class: T01

International Patent Class (Main): G06F-009/46; **G06F-012/00** ; G06F-015/16
File Segment: EPI

014165217   **Image available**
WPI Acc No: 2001-649445/200175
XRPX Acc No: N01-485382
  **Scalable multimedia file system supports workstation to perform requested
  file operation, when sufficient network bandwidth and disk capacity are
  available**
Patent Assignee: MATSUSHITA ELECTRIC IND CO LTD (MATU); MATSUSHITA DENKI
  SANGYO KK (MATU)
Inventor: **KAMEL I M** ; MOHAPATRA P; MUKHERJEE S; **KAMEL I**
Number of Countries: 004 Number of Patents: 005
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
DE 10036726	A1	20010329	DE 1036726	A	20000727	200175	B
GB 2357171	A	20010613	GB 200018082	A	20000725	200175	
JP 2001117807	A	20010427	JP 2000226653	A	20000727	200175	
GB 2357171	B	20011121	GB 200018082	A	20000725	200201	
US 6466978	B1	20021015	US 99362819	A	19990728	200271	

Priority Applications (No Type Date): US 99362819 A 19990728
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
DE 10036726	A1		74	H04L-012/00	
GB 2357171	A			G06F-017/30	
JP 2001117807	A		145	G06F-012/00	
GB 2357171	B			G06F-017/30	
US 6466978	B1			G06F-015/173	

Abstract (Basic): DE 10036726 A1
     NOVELTY - An access controller in cluster manager (404), regulates
the file access request from workstation (408). A network status
determination device and a disk status determination device determine
network bandwidth and disk capacity, respectively response to file
access request from workstation. The file system supports requested
file operation, if available network bandwidth and disk capacity are
sufficient.
     DETAILED DESCRIPTION - The file system (400) is divided into
clusters (401) having a disk (402), cluster manager (404) and file
manager (406). Access controller in the cluster manager regulates the
file access request from workstation (408). A network status
determination device in the file manager, determines the available
network bandwidth, in response to the access request from workstation.
A disk status device determines the available disk capacity in response
to the file access request. The system supports requested file
operation if the available network bandwidth and disk capacity are
sufficient. An INDEPENDENT CLAIM is also included for file access
control method.
     USE - Scalable multimedia file system with network backup storage
device for e.g. remote lessons and education, multimedia entertainment,
message processing and distribution, video-on-demand in hotels and
companies, multimedia communication and advertisement.
     ADVANTAGE - Supports multiple workstations, by sharing network load
smoothly based on calculated network bandwidth and disk capacity.
Minimizes network traffic by controlling file access request from
workstation.
     DESCRIPTION OF DRAWING(S) - The figure shows the block diagram of
hybrid file system.
     File system (400)
     Cluster (401)
     Disk (402)
     Cluster manager (404)
     File manager (406)

Workstation (408)
    pp; 74 DwgNo 9A/11
Title Terms: FILE; SYSTEM; SUPPORT; PERFORMANCE; REQUEST; FILE; OPERATE;
  SUFFICIENT; NETWORK; BANDWIDTH; DISC; CAPACITY; AVAILABLE
Derwent Class: T01; W01; W02; W04
International Patent Class (Main): **G06F-012/00** ; G06F-015/173; G06F-017/30
  ; H04L-012/00
International Patent Class (Additional): G06F-003/06; G06F-015/16;
  H04L-009/06
File Segment: EPI

```
Set       Items     Description
S1         2869     OSGI OR OPEN()STANDARD()GATEWAY? OR HOME()AUDIO()VIDEO OR -
                    JAVA()NAMING(N)DIRECTOR? OR (HOUSEHOLD OR SMARTHOUSE OR HOME)-
                    (N)(SERVER? OR ROUTER? OR GATEWAY?) OR STB OR JINI OR HAVI OR
                    UPNP OR HOMERF OR HOME()RF
S2      3032983     MEMOR? OR SPACE? OR STORAGE? OR RAM OR SRAM OR ROM
S3       910195     ALLOCAT? OR DISBURS? OR DISTRIBUT? OR RESERV? OR SCHEDUL?
S4      1297794     DEPEND? OR ASSOCIAT? OR LINK? OR BUNDLE?
S5      1523347     SERVICE()INSTANCE? OR PROGRAM? OR APPLICATION? OR CALL OR -
                    DEMAND?
S6      1959754     FEWEST OR LOWEST OR MINIMAL OR SMALLEST OR LEAST
S7      2251950     GREATEST OR MOST OR MORE OR THRESHOLD? OR BENCHMARK? OR LI-
                    MIT?
S8      1841234     EXCEED? OR MORE? OR TOO()MUCH? OR OVERSUBSCRIB? OR OVERWHE-
                    LM?
S9      2050461     ALGORITHM? OR FORMULA? OR TABLE? OR CALCULAT? OR MATRIX?
S10          14     S1 AND S2(2N)S3
S11          15     S1 AND (S2 OR S3) AND S4(3N)S5
S12       34560     S2 AND S8 AND S9
S13           3     S1 AND S12
S14         100     S2 AND S3 AND S4 AND S5 AND S6 AND S7 AND S8 AND S9
S15        6554     S4 AND S5 AND (S7 OR S8) AND S9
S16         163     S15 AND (GATEWAY? OR SERVER? OR ROUTER?)
S17          20     S4(3N)S5 AND S16
S18           7     S14 AND (S1 OR GATEWAY? OR SERVER? OR ROUTER?)
S19          54     S10 OR S11 OR S13 OR S17 OR S18
S20       11154     MC=T01-F05E
S21           3     S19 AND S20
S22          35     S19 AND IC=G06F
S23          35     S21 OR S22
S24          35     IDPAT (sorted in duplicate/non-duplicate order)
S25          33     IDPAT (primary/non-duplicate records only)
File 347:JAPIO Nov 1976-2004/Dec(Updated 050405)
         (c) 2005 JPO & JAPIO
File 350:Derwent WPIX 1963-2005/UD,UM &UP=200527
         (c) 2005  Thomson Derwent
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016550185   **Image available**
WPI Acc No: 2004-708926/200469
Related WPI Acc No: 2002-255236; 2002-291082; 2002-462929; 2004-774468
XRPX Acc No: N04-562161
   **Data packet processing method used with wireless device, involves
   associating data of received data packet with software application**
Patent Assignee: FILLEBROWN L A (FILL-I); GLOVER K M (GLOV-I); KAUTZ R D
   (KAUT-I)
Inventor: FILLEBROWN L A; GLOVER K M; KAUTZ R D
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 20040193675	A1	20040930	US 2000212203	P	20000616	200469	B
			US 2001775042	A	20010201		

Priority Applications (No Type Date): US 2000212203 P 20000616; US
   2001775042 A 20010201
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20040193675	A1		16	G06F-015/16	Provisional application US 2000212203

Abstract (Basic): US 20040193675 A1
      NOVELTY - A data packet is received through wireless protocol, and
   the data of the received packet is **associated** with a software
   application executing on a wireless server (140). The data is
   processed using the software application.
      DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the
   following:
      (1) information processing method;
      (2) wireless client display updating method;
      (3) method for utilizing computer system for information
   processing;
      (4) method for utilizing computer system for updating wireless
   client display;
      (5) computer system for data packet processing;
      (6) computer readable medium storing data packet processing
   program;
      (7) computer readable medium storing information processing
   program;
      (8) computer readable medium storing wireless client display
   updating program;
      (9) computer readable medium storing program for utilizing computer
   system for data packet processing;
      (10) computer readable medium storing program for utilizing
   computer system for information processing;
      (11) computer readable data signal storing data packet processing
   instruction; and
      (12) computer **memory** storing data packet processing data
   structure.
      USE - For processing data packet in wireless network e.g. local
   area network (LAN) and wide area network (WAN) connecting wireless
   device such as laptop, wireless tablet device with color touch screen
   display, smart phone, personal digital assistant, personal computer,
   wireless repeater, wireless infrared converter, and wireless smart
   appliance such as radio, television, cable box, light, alarm, microwave
   oven, washer, dryer, water faucet, heating oil pump and thermostat.
   Also used with network enabled application e.g. network enabled games,
   word processing application, database application, **scheduling**
   application, spreadsheet application, internet enabled application and
   wireless smart appliance application.
      ADVANTAGE - Provides personalized wireless network that is
   inexpensive, scalable and flexible. Enables bandwidth efficient and

time efficient display updating process.
DESCRIPTION OF DRAWING(S) - The figure shows a schematic
representation of the personal wireless network.
wireless tablet devices (110,112,114)
microwave oven (116)
· radio (118)
wireless router (120)
wireless server (140)
pp; 16 DwgNo 1/9
Title Terms: DATA; PACKET; PROCESS; METHOD; WIRELESS; DEVICE; ASSOCIATE;
  DATA; RECEIVE; DATA; PACKET; SOFTWARE; APPLY
Derwent Class: T01; W01
International Patent Class (Main): **G06F-015/16**
File Segment: EPI

DIALOG(R)File 350:Derwent WPIX
(c) 2005 Thomson Derwent. All rts. reserv.

016428237   **Image available**
WPI Acc No: 2004-586152/200457
XRPX Acc No: N04-463538
   **Bundle reconfiguration system compares class, component and package
   contained in each bundle acquired by** home gateway **, based on which
   class/component/package common to both bundles are determined for
   integrating the bundles**
Patent Assignee: SEIKO EPSON CORP (SHIH)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 2004227240	A	20040812	JP 200313609	A	20030122	200457	B

Priority Applications (No Type Date): JP 200313609 A 20030122
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 2004227240	A		40	G06F-009/54	

Abstract (Basic): JP 2004227240 A
       NOVELTY - A **home   gateway** acquires control bundle from a bundle
   management server, and stores it in a **RAM** . When **RAM** usage rate is
   beyond a preset value, the class, component and package contained in
   control bundle (A) and in prestored control bundle (B) are compared,
   based on which the class/component/package common to both bundles is
   designated as common class/common component/common package, for bundle
   integration.
       DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the
   following:
       (1) bundle reconfiguration method;
       (2) **bundle** reconfiguration **program** .
       USE - Bundle reconfiguration system comprising **home   gateway**
   connected to personal computer, set top box (**STB**), personal digital
   assistant (PDA), mobile telephone, network card.
       ADVANTAGE - The utilization effectiveness of **memory** is improved,
   and the burden on the gateway terminal accompanying reconfiguration of
   bundle is reduced.
       DESCRIPTION OF DRAWING(S) - The figure shows an explanatory drawing
   of the control bundle. (Drawing includes non-English language text).
       pp; 40 DwgNo 15/24
Title Terms: BUNDLE; RECONFIGURE; SYSTEM; COMPARE; CLASS; COMPONENT;
   PACKAGE; CONTAIN; BUNDLE; ACQUIRE; HOME; GATEWAY; BASED; CLASS; COMPONENT
   ; PACKAGE; COMMON; BUNDLE; DETERMINE; INTEGRATE; BUNDLE
Derwent Class: T01; W01
International Patent Class (Main): **G06F-009/54**
International Patent Class (Additional): **G06F-017/60**
File Segment: EPI

015972639   **Image available**
WPI Acc No: 2004-130480/200413
XRPX Acc No: N04-104019
   Relational data structures access management method in distributed
   computing environment, involves associating **independent locks of**
   relational data structures with local tree that allows access to
   relational data structure
Patent Assignee: INT BUSINESS MACHINES CORP (IBMC)
Inventor: CHAMPAGNE S R; MARTHI K N; UCEDA-SOSA R A
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 6681225	B1	20040120	US 2000584523	A	20000531	200413	B

Priority Applications (No Type Date): US 2000584523 A 20000531
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 6681225	B1		18	G06F-007/00	

Abstract (Basic): US 6681225 B1
      NOVELTY - The independent locks for the relational data structures
   of a global data **storage** , are obtained using a client **application**
   (1) including independent libraries. The independent locks are
   associated with at **least** one local tree that allows access to
   relational data structure using another client **application** (2).
      DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the
   following:
      (1) relational data structures access management system; and
      (2) relational data structures access management **program** **storage**
   device.
      USE - Used for managing access to relational data structures in
   distributed computing environment e.g. client-client environments,
   client- **server** environments.
      ADVANTAGE - Allows several clients to modify the global **tables**
   residing in one or **more** global repositories in a consistent,
   co-operative and efficient manner. Provides platform independent
   capability, as the operating system kernel extensions are not needed.
      DESCRIPTION OF DRAWING(S) - The figure shows a graphical
   representation of using the select and merge functions within a lock
   block.
      pp; 18 DwgNo 10/10
Title Terms: RELATED; DATA; STRUCTURE; ACCESS; MANAGEMENT; METHOD;
   DISTRIBUTE ; COMPUTATION; ENVIRONMENT; **ASSOCIATE** ; INDEPENDENT; LOCK;
   RELATED; DATA; STRUCTURE; LOCAL; TREE; ALLOW; ACCESS; RELATED; DATA;
   STRUCTURE
Derwent Class: T01
International Patent Class (Main): **G06F-007/00**
File Segment: EPI

25/5/22   (Item 22 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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012542729   **Image available**
WPI Acc No: 1999-348835/199930
XRPX Acc No: N99-260901
  Serial bus controller for controlling and performing reservation of transmission bandwidth and transmission channel using IEEE 1394 serial bus
Patent Assignee: MATSUSHITA ELECTRIC IND CO LTD (MATU); MATSUSHITA DENKI SANGYO KK (MATU)
Inventor: HAMAMOTO Y; TAKEDA H
Number of Countries: 027 Number of Patents: 003
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 921472	A2	19990609	EP 98122576	A	19981203	199930	B
JP 11168473	A	19990622	JP 97334326	A	19971204	199935	
US 6311243	B1	20011030	US 98203836	A	19981202	200172	

Priority Applications (No Type Date): JP 97334326 A 19971204
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 921472	A2	E	24	G06F-013/38	

    Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI

JP 11168473	A		13	H04L-012/28	
US 6311243	B1			G06F-013/00	

Abstract (Basic): EP 921472 A2
      NOVELTY - The controller carries out reservation management of a serial bus by defining and using registers on CSR **space** for managing **reservations** of transmission bandwidth and transmission channel from present to future times.
      DETAILED DESCRIPTION - A table is provided which controls a serial bus which has the function for securing a transmission bandwidth for a packet to the serial bus. The table is formed as a reservation control table and indicates a reservation of a transmission bandwidth and a transmission control channel which is required from T1 until time T2. The reservation control table is stored and controlled on a register assigned to an address space which is accessible for reading and writing from an arbitrary node on the serial bus.
      USE - Controlling the use a bus, which can secure transmission bandwidth and transmission channel using IEEE 1394 serial bus over a secured time interval, when recording data e.g. digital data in a VCR. Making a reservation for recording from a **STB** to a VCR connected to a bus.
      ADVANTAGE - Provides reservation management for future time using a serial bus for securing transmission bandwidth and transmission channel according to IEEE 1394 standard, and which is compatible with conventional systems.
      DESCRIPTION OF DRAWING(S) - The drawing is a block diagram showing a serial bus control apparatus of an embodiment of the invention.
      CPU (101)
      System controller (102)
      Timer (103)
      Memory (104)
      Serial bus controller (105)
      pp; 24 DwgNo 1/115
Title Terms: SERIAL; BUS; CONTROL; CONTROL; PERFORMANCE; RESERVE; TRANSMISSION; BANDWIDTH; TRANSMISSION; CHANNEL; SERIAL; BUS
Derwent Class: T01; W03; W04
International Patent Class (Main): **G06F-013/00** ; **G06F-013/38** ; H04L-012/28
International Patent Class (Additional): G11B-015/02; G11B-020/10;

010565718   **Image available**
WPI Acc No: 1996-062671/199607
XRPX Acc No: N96-052467
    Programming **support method for LAN environment - by monitoring system
    integration function management of collecting and managing schedule
    slippage of** server **machine through creation of customised part and
    link** table **module**
Patent Assignee: HITACHI LTD (HITA)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 7319679	A	19951208	JP 94116207	A	19940530	199607	B

Priority Applications (No Type Date): JP 94116207 A 19940530
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 7319679	A		5	G06F-009/06	

Abstract (Basic): JP 7319679 A
    The method involves monitoring the system integration function
management of collecting and managing the day to day schedule slippage
of a given **server** machine (2) that is connected to a LAN (1). This is
done by creating a customised part and **link** table of a module (4)
which has the function of carrying out the selection support of the
optimum **programming** part, in the development of a **program**
specification.
    The influence range **associated** with a **programming** part lipo (3)
is clarified. This performs the **link** attachment of the **programming**
part to the module. Finally, a process management **table** (5) which has
the calendar function is given to the **server** machine in which the
updating authority of a development machine (7a-7n) is **limited** only
to a system administrator.
    ADVANTAGE - Performs efficient interactive **programming** for two or
more developers. Prevents version mismatching and schedule delay
caused by connection leak or timing slippage in development return
production, due to attachment of **programming** part lipo and module.
    Dwg.1/6
Title Terms: **PROGRAM** ; SUPPORT; METHOD; LAN; ENVIRONMENT; MONITOR; SYSTEM;
  INTEGRATE; FUNCTION; MANAGEMENT; COLLECT; MANAGE; SCHEDULE; SLIP; SERVE;
  MACHINE; THROUGH; CREATION; CUSTOMISATION; PART; **LINK** ; **TABLE** ; MODULE
Index Terms/Additional Words: **LOCAL_A REA_ NETWO RKPro** ; AREA; NETWORK
Derwent Class: T01
International Patent Class (Main): **G06F-009/06**
File Segment: EPI

08152336   **Image available**
SERVICE **LINKING** SYSTEM, SERVICE **LINKING** METHOD AND SERVICE **LINKING** **PROGRAM**

PUB. NO.:·   2004-265096 [JP 2004265096 A]
PUBLISHED: September 24, 2004 (20040924)
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              NANBA KOJI
APPLICANT(s): NIPPON TELEGRAPH & TELEPHONE WEST CORP
APPL. NO.:   2003-054212 [JP 200354212]

FILED: February 28, 2003 (20030228)
INTL CLASS: **G06F-013/00 ; G06F-015/16**

ABSTRACT

PROBLEM TO BE SOLVED: To provide a service **linking** system, a service **linking** method and a service **linking** **program** capable of contributing to flexibly coping with changes of a system environment state and a service configuration and stable service provision even if a system environmental situation and the configuration of a service to be provided are changed on each computer system, in a computer system for providing various services for service users through a computer network.

SOLUTION: A **server** state management part 21 of the service **linking** system 2 periodically **calculates** **server** connection states and operation rates of **servers** of a **server** group 1 and leads **server** information which can provide a service with a certain **threshold** value. A service pattern management part 22 determines a providable service pattern from **server** connection information. A service generation part 23 generates a providable service to a service user terminal 4 from the **server** information of **server** operation rates which are equal to or larger than the **threshold** value and service-providable service patterns.

```
Set      Items    Description
S1        2869    OSGI OR OPEN()STANDARD()GATEWAY? OR HOME()AUDIO()VIDEO OR -
                  JAVA()NAMING(N)DIRECTOR? OR (HOUSEHOLD OR SMARTHOUSE OR HOME)-
                  (N)(SERVER? OR ROUTER? OR GATEWAY?) OR STB OR JINI OR HAVI OR
                  UPNP OR HOMERF OR HOME()RF
S2     3032983    MEMOR? OR SPACE? OR STORAGE? OR RAM OR SRAM OR ROM
S3      910195    ALLOCAT? OR DISBURS? OR DISTRIBUT? OR RESERV? OR SCHEDUL?
S4     1297794    DEPEND? OR ASSOCIAT? OR LINK? OR BUNDLE?
S5     1523347    SERVICE()INSTANCE? OR PROGRAM? OR APPLICATION? OR CALL OR -
                  DEMAND?
S6     1959754    FEWEST OR LOWEST OR MINIMAL OR SMALLEST OR LEAST
S7     2251950    GREATEST OR MOST OR MORE OR THRESHOLD? OR BENCHMARK? OR LI-
                  MIT?
S8     1841234    EXCEED? OR MORE? OR TOO()MUCH? OR OVERSUBSCRIB? OR OVERWHE-
                  LM?
S9     2050461    ALGORITHM? OR FORMULA? OR TABLE? OR CALCULAT? OR MATRIX?
S10         14    S1 AND S2(2N)S3
S11         15    S1 AND (S2 OR S3) AND S4(3N)S5
S12      34560    S2 AND S8 AND S9
S13          3    S1 AND S12
S14        100    S2 AND S3 AND S4 AND S5 AND S6 AND S7 AND S8 AND S9
S15       6554    S4 AND S5 AND (S7 OR S8) AND S9
S16        163    S15 AND (GATEWAY? OR SERVER? OR ROUTER?)
S17         20    S4(3N)S5 AND S16
S18          7    S14 AND (S1 OR GATEWAY? OR SERVER? OR ROUTER?)
S19         54    S10 OR S11 OR S13 OR S17 OR S18
S20      11154    MC=T01-F05E
S21          3    S19 AND S20
S22         35    S19 AND IC=G06F
S23         35    S21 OR S22
S24         35    IDPAT (sorted in duplicate/non-duplicate order)
S25         33    IDPAT (primary/non-duplicate records only)
S26         96    S1 AND S2(3N)(S3 OR MANAGE? OR CONTROL? OR ADMINIST?)
S27         16    S4 AND S26
S28         10    S27 NOT S19
S29         10    S28 AND IC=(G06F OR H04L)
S30         16    S26 AND S9
S31          9    S30 NOT (S27 OR S19)
S32          4    S31 AND IC=(G06F OR H04L)
File 347:JAPIO Nov 1976-2004/Dec(Updated 050405)
         (c) 2005 JPO & JAPIO
File 350:Derwent WPIX 1963-2005/UD,UM &UP=200527
         (c) 2005  Thomson Derwent
```

016411054   **Image available**
WPI Acc No: 2004-568966/200455
   Home   gateway **switch structure for ensuring QoS between different
   kinds of protocol**
Patent Assignee: KOREA ELECTRONIC TECHNOLOGY INST (KOEL-N)
Inventor: CHOI G S; JUNG G M
Number of Countries: 001 Number of Patents: 001
Patent Family:
Patent No   Kind   Date   Applicat No   Kind   Date   Week
KR 2004033565 A   20040428 KR 200262704   A   20021015 200455 B

Priority Applications (No Type Date): KR 200262704 A 20021015
Patent Details:
Patent No Kind Lan Pg   Main IPC   Filing Notes
KR 2004033565 A   1 H04L-012/66

Abstract (Basic): KR 2004033565 A
      NOVELTY - A **home   gateway** switch structure for ensuring
   QoS(Quality of Service) between different kinds of protocol is provided
   to guarantee QoS between respectively different protocols.
      DETAILED DESCRIPTION - A packet processing part(100) encapsulates a
   common protocol header at the front end of a switching block in order
   to switch various packets of various protocols. A
   segmentation/Reassembly part(104) segments various protocol packets,
   supplied from the packet processing part(100) into many sub packets at
   a size of 256 bytes. A switching part(102) receives the 256-byte
   segmented packets, supplied from the segmentation/Reassembly part(104),
   through a bus controller(110), classifies the QoS of the received
   packets through a QoS/priority controller(114), and classifies the
   priority according to a priority **algorithm** . Then the switching
   part(102) stores the QoS/priority-classified packets respectively in a
   QoS buffer and a priority buffer, **allocated** to the first **memory**
   (120) in an external packet memory part(118), through a **memory**
   controller (112).
      pp; 1 DwgNo 1/10
Title Terms: HOME; GATEWAY; SWITCH; STRUCTURE; ENSURE; KIND; PROTOCOL
Derwent Class: W01
International Patent Class (Main): **H04L-012/66**
File Segment: EPI

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Set      Items    Description
S1        2869    OSGI OR OPEN()STANDARD()GATEWAY? OR HOME()AUDIO()VIDEO OR -
                  JAVA()NAMING(N)DIRECTOR? OR (HOUSEHOLD OR SMARTHOUSE OR HOME)-
                  (N)(SERVER? OR ROUTER? OR GATEWAY?) OR STB OR JINI OR HAVI OR
                  UPNP OR HOMERF OR HOME()RF
S2     3032983    MEMOR? OR SPACE? OR STORAGE? OR RAM OR SRAM OR ROM
S3      910195    ALLOCAT? OR DISBURS? OR DISTRIBUT? OR RESERV? OR SCHEDUL?
S4     1297794    DEPEND? OR ASSOCIAT? OR LINK? OR BUNDLE?
S5     1523347    SERVICE()INSTANCE? OR PROGRAM? OR APPLICATION? OR CALL OR -
                  DEMAND?
S6     1959754    FEWEST OR LOWEST OR MINIMAL OR SMALLEST OR LEAST
S7     2251950    GREATEST OR MOST OR MORE OR THRESHOLD? OR BENCHMARK? OR LI-
                  MIT?
S8     1841234    EXCEED? OR MORE? OR TOO()MUCH? OR OVERSUBSCRIB? OR OVERWHE-
                  LM?
S9     2050461    ALGORITHM? OR FORMULA? OR TABLE? OR CALCULAT? OR MATRIX?
S10         14    S1 AND S2(2N)S3
S11         15    S1 AND (S2 OR S3) AND S4(3N)S5
S12      34560    S2 AND S8 AND S9
S13          3    S1 AND S12
S14        100    S2 AND S3 AND S4 AND S5 AND S6 AND S7 AND S8 AND S9
S15       6554    S4 AND S5 AND (S7 OR S8) AND S9
S16        163    S15 AND (GATEWAY? OR SERVER? OR ROUTER?)
S17         20    S4(3N)S5 AND S16
S18          7    S14 AND (S1 OR GATEWAY? OR SERVER? OR ROUTER?)
S19         54    S10 OR S11 OR S13 OR S17 OR S18
S20      11154    MC=T01-F05E
S21          3    S19 AND S20
S22         35    S19 AND IC=G06F
S23         35    S21 OR S22
S24         35    IDPAT (sorted in duplicate/non-duplicate order)
S25         33    IDPAT (primary/non-duplicate records only)
S26         96    S1 AND S2(3N)(S3 OR MANAGE? OR CONTROL? OR ADMINIST?)
S27         16    S4 AND S26
S28         10    S27 NOT S19
S29         10    S28 AND IC=(G06F OR H04L)
File 347:JAPIO Nov 1976-2004/Dec(Updated 050405)
         (c) 2005 JPO & JAPIO
File 350:Derwent WPIX 1963-2005/UD,UM &UP=200527
         (c) 2005  Thomson Derwent
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016885936   **Image available**
WPI Acc No: 2005-210220/200522
XRPX Acc No: N05-173539
   Memory   management **method for personal computer, involves enabling
application programming interface to perform registration operation
indicating portion of** memory **is to be** reserved **for use by virtual
machine during program execution**
Patent Assignee: INT BUSINESS MACHINES CORP (IBMC)
Inventor: LAWRENCE K R; MATTHEWS G C
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 6862650	B1	20050301	US 97970417	A	19971114	200522	B

Priority Applications (No Type Date): US 97970417 A 19971114
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 6862650	B1		13	G06F-012/02	

Abstract (Basic): US 6862650 B1
     NOVELTY - The operation of Java virtual machine is initiated to
selectively convert portion of software program to byte-code values
that are stored in a **memory** . Page **manager** is enabled to selectively
enable the memory to discard stored values. Application programming
interface is enabled to perform registration operation indicating a
memory portion is to be reserved for use by the machine during program
execution.
     DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the
following:
     (1) computer program product for managing memory; and
     (2) data processing system.
     USE - For managing memory in data processing system such as
personal computer (PC), personal digital assistant (PDA), set-top-box (
STB) and web television.
     ADVANTAGE - The heap **associated** with the virtual machine is
managed efficiently, thereby ensuring efficient and timely execution of
applications implemented using Java programming language.
     DESCRIPTION OF DRAWING(S) - The figure shows the block diagram of
the data processing system.
     pp; 13 DwgNo 6/6
Title Terms: MEMORY; MANAGEMENT; METHOD; PERSON; COMPUTER; ENABLE; APPLY;
  PROGRAM; INTERFACE; PERFORMANCE; REGISTER; OPERATE; INDICATE; PORTION;
  MEMORY; RESERVE; VIRTUAL; MACHINE; PROGRAM; EXECUTE
Derwent Class: T01
International Patent Class (Main): **G06F-012/02**
File Segment: EPI

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Set      Items    Description
S1        6564    OSGI OR OPEN()STANDARD()GATEWAY? OR HOME()AUDIO()VIDEO OR -
                  JAVA()NAMING(N)DIRECTOR? OR (HOUSEHOLD OR SMARTHOUSE OR HOME)-
                  (N)(SERVER? OR ROUTER? OR GATEWAY?) OR STB OR JINI OR HAVI OR
                  UPNP OR HOMERF OR HOME()RF
S2      987100    MEMOR? OR SPACE? OR STORAGE? OR RAM OR SRAM OR ROM
S3      644250    ALLOCAT? OR DISBURS? OR DISTRIBUT? OR RESERV? OR SCHEDUL?
S4     1250447    DEPEND? OR ASSOCIAT? OR LINK? OR BUNDLE?
S5     2512617    SERVICE()INSTANCE? OR PROGRAM? OR APPLICATION? OR CALL OR -
                  DEMAND?
S6     1331568    FEWEST OR LOWEST OR MINIMAL OR SMALLEST OR LEAST
S7     1631899    GREATEST OR MOST OR MORE OR THRESHOLD? OR BENCHMARK? OR LI-
                  MIT?
S8     1387089    EXCEED? OR MORE? OR TOO()MUCH? OR OVERSUBSCRIB? OR OVERWHE-
                  LM?
S9      954717    ALGORITHM? OR FORMULA? OR TABLE? OR CALCULAT? OR MATRIX?
S10         60    S1 (10N) S2(2N)S3
S11         94    S1 (10N) (S2 OR S3) (12N) S4(3N)S5
S12      18094    S2 (12N) S8 (12N) S9
S13         16    S1 (12N) S12
S14       1266    S2 (S) S3 (S) S4 (S) S5 (S) S6 (S) S7 (S) S8 (S) S9
S15      10245    S4 (12N) S5 (12N) (S7 OR S8) (12N) S9
S16        370    S15 (10N) (GATEWAY? OR SERVER? OR ROUTER?)
S17        368    S4(3N)S5 (12N) S16
S18        263    S14 (13N) (S1 OR GATEWAY? OR SERVER? OR ROUTER?)
S19        877    S1(3N)(MANAGE? OR CONTROL? OR ADMINIST? OR MONITOR?)
S20          4    S19(S)S14
S21          3    S10(S)S11
S22          2    S14(S)S16
S23          4    S18(S)S19
S24         47    S1(5N)S2(3N)S3
S25         53    S20:S24
S26         34    S25 AND IC=(G06F OR H04L)
S27         34    IDPAT (sorted in duplicate/non-duplicate order)
S28         34    IDPAT (primary/non-duplicate records only)
File 348:EUROPEAN PATENTS 1978-2005/Apr W04
         (c) 2005 European Patent Office
File 349:PCT FULLTEXT 1979-2005/UB=20050428,UT=20050421
         (c) 2005 WIPO/Univentio
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28/3,K/26   (Item 26 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
(c) 2005 WIPO/Univentio. All rts. reserv.

00852798   **Image available**
BRIDGING BETWEEN A DATA REPRESENTATION LANGUAGE MESSAGE-BASED DISTRIBUTED COMPUTING ENVIRONMENT AND OTHER ENVIRONMENTS .
LIAISON ENTRE UN ENVIRONNEMENT INFORMATIQUE DISTRIBUE BASE SUR LA MESSAGERIE EN LANGAGE DE REPRESENTATION DES DONNEES ET D'AUTRES ENVIRONNEMENTS
Patent Applicant/Assignee:
  SUN MICROSYSTEMS INC, 901 San Antonio Road, Palo Alto, CA 94303, US, US (Residence), US (Nationality)
Inventor(s):
  SLAUGHTER Gregory L, 3326 Emerson St., Palo Alto, CA 94306, US,
  SAULPAUGH Thomas E, 6938 Bret Harte Dr., San Jose, CA 95120, US,
  TRAVERSAT Bernard A, 2055 California St., Apartmennt 402, San Francisco, CA 94109, US,
  ABDELAZIZ Mohamed M, 78 Cabot Ave., Santa Clara, CA 95051, US,
  DUIGOU Michael J, 33928 Capulet Circle, Fremont, CA 94555, US,
Legal Representative:
  KOWERT Robert C (agent), Conley, Rose & Tayon, P.C., P.O. Box 398, Austin, TX 78767-0398, US,
Patent and Priority Information (Country, Number, Date):
  Patent: WO 200186422 A2-A3 20011115 (WO 0186422)
  Application: WO 2001US15133 20010509 (PCT/WO US0115133)
  Priority Application: US 2000202975 20000509; US 2000208011 20000526; US 2000209430 20000602; US 2000209140 20000602; US 2000209525 20000605; US 2000693672 20001019
Designated States:
(Protection type is "patent" unless otherwise stated - for applications prior to 2004)
  AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
  (EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
  (OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
  (AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
  (EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 76340

Main International Patent Class: **G06F-009/46**
International Patent Class: **H04L-029/06**
Fulltext Availability:
  Detailed Description

Detailed Description
... is based on an RMI layer 14 over a TCP/IP capable networking layer 16.

  Jini is a promising technology for simplifying **distributed** computing. However, for certain types of devices, **Jini** may not be. appropriate. The computing landscape is moving toward a distributed, Web-centric service...analyzed. Thus, Java serialization/deserialization is slow and cumbersome while also requiring large amounts of **application** and, NM code as well as persistent **storage space** .

  Even for dun clients that do support Java, the **Jini** RMI may not be practical for thin. clients with minirnal mernory f~prints and, minimal bandwidlh. The serialization **associated** with the **Jini** RMI is slow, big, requires the JVM reflection API, and is a Java specific object...In one embodiment, a connector mechanism may be defined that enables the dynarnic advertisement of **Jini** services in **distributed** computing

enviromnent **spaces** , and that also may enable the accessing of a Jini service proxy from. clients in...

...When informed of a new Jini service, the agent may perform a lookup in Jini **spaces** to locate newly advertised **Jini** services and to update the **distributed** computing environment **space** with new XIVM advertisements for the new services. In one embodiment, when a Jini service...Tfie distributed computing enviromnent client proxy 1904 may advertise RMI-based enviromnent 1902 (e.g. **Jini**) services 1906 in **spaces** 1908 in the **distributed** computing envirom-nent 1900. In one embodiment, the choice of which services 1906 to advertise...

00852796   **Image available**
MECHANISM AND APPARATUS FOR ACCESSING AND ADDRESSING SERVICES IN A DISTRIBUTED COMPUTING ENVIRONMENT
MECANISME ET APPAREIL D'ACCES ET D'ADRESSAGE DE SERVICES DANS UN ENVIRONNEMENT INFORMATIQUE REPARTI
Patent Applicant/Assignee:
  SUN MICROSYSTEMS INC, 901 San Antonio Road, Palo Alto, CA 94303, US, US
    (Residence), US (Nationality)
Inventor(s):
  SLAUGHTER Gregory L, 3326 Emerson Street, Palo Alto, CA 94306, US,
  SAULPAUGH Thomas E, 6938 Bret Harte Drive, San Jose, CA 95120, US,
  TRAVERSAT Bernard A, 2055 California Street, Apt. 402, San Francisco, CA
    94109, US,
  ABDELAZIZ Mohamed M, 78 Cabot Avenue, Santa Clara, CA 95051, US,
Legal Representative:
  KOWERT Robert C (agent), Conley, Rose & Tayon, P.C., P.O. Box 398,
    Austin, TX 78767-0398, US,
Patent and Priority Information (Country, Number, Date):
  Patent: WO 200186420 A2-A3 20011115 (WO 0186420)
  Application: WO 2001US15044 20010509 (PCT/WO US0115044)
  Priority Application: US 2000202975 20000509; US 2000208011 20000526; US
    2000209430 20000602; US 2000209140 20000602; US 2000209525 20000605; US
    2000660563 20000912
Designated States:
(Protection type is "patent" unless otherwise stated - for applications
prior to 2004)
  AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE
  ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT
  LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM
  TR TT TZ UA UG UZ VN YU ZA ZW
  (EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
  (OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
  (AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
  (EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 65191

Main International Patent Class: **G06F-009/46**
International Patent Class: **G06F-017/30**
Fulltext Availability:
  Detailed Description
Detailed Description
... In one embodiment, a connector mechanism may be defined that enables
  the dynarnic advertisement of **Jini** services in **distributed** computing
  environment **spaces** , and that also may enable the accessing of a Jini
  service proxy from clients in...

...When informed of a new Jini service, the agent may perform a lookup in
  Jini **spaces** to locate newly advertised **Jini** services and to update
  the **distributed** computing environment **space** with r(inverted question
  mark)ew XMI, advertisernents for the new services. In one embodiment...

00801757   **Image available**
A DECISION BASED SYSTEM FOR MANAGING DISTRIBUTED RESOURCES AND MODELING THE GLOBAL OPTIMIZATION PROBLEM
SYSTEME DECISIONNEL DE GESTION DE RESSOURCES DISTRIBUEES ET DE MODELISATION D'UN PROBLEME D'OPTIMISATION GLOBALE

Patent Applicant/Inventor:
  FAKHOURI Sameh A, 143 Storer Avenue, New Rochelle, NY 10801, US, US
    (Residence), US (Nationality)
  JEROME William F, 4 Noel Court, Anawalk, NY 10501, US, US (Residence), US
    (Nationality)
  KUMMAMURU Krishna, 86/4 Opp NCC Office, Safdariung Enclave, New Delhi
    110016, IN, IN (Residence), IN (Nationality)
  NAIK Vijay E, 48 Iroquois Road, Pleasantville, NY 10570, US, US
    (Residence), IN (Nationality)
  PERSHING John A Jr, 162 Cortlandt Street, Buchanan, NY 10511, US, US
    (Residence), US (Nationality)
  RAINA Ajay, 131-B, Uttam Nagar, Kuniwani, Jammu-J & K-180010, IN, IN
    (Residence), IN (Nationality)
  VARMA Pradeep, 10 West Avenue, IIT Campus, Hauz Khas, New Delhi 110016,
    IN, IN (Residence), IN (Nationality)
  BADOVINATZ Peter, 13740 SW 27th Court, Beaverton, OR 97008, US, US
    (Residence), US (Nationality)
  KUMAR Ajay, New Orchard Road, Armonk, NY 10504, US, US (Residence), IN
    (Nationality)
Legal Representative:
  DIGIGLIO Frank S (et al) (agent), Scully, Scott, Murphy & Presser, 400
    Garden City Plaza, Garden City, NY 11530, US,
Patent and Priority Information (Country, Number, Date):
  Patent: WO 200135278 A1 20010517 (WO 0135278)
  Application: WO 2000US30913 20001110 (PCT/WO US0030913)
  Priority Application: US 99164527 19991110; US 2000197036 20000413
Designated States:
(Protection type is "patent" unless otherwise stated - for applications
prior to 2004)
  AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE
  ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT
  LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI. SK SL TJ TM
  TR TT TZ UA UG UZ VN YU ZA ZW
  (EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
  (OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
  (AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
  (EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 23454

Main International Patent Class: **G06F-017/30**
Fulltext Availability:
  Claims

Claim
... allows S-contained supports for a TLR in S to be partitioned such that
   no **dependency** edge inbetween resources comprising the TLR and the
   supports crosses a partition boundary.
   3 7...

...resource group is a proxy TLR that I 0 is constructed as a resource that
   depends on the TLRs contained in S. Strictly speaking, after this
   construction, the TLRs of S...

...equiv alency of the leaf-level proxies is made. The proxy TLR is defined

to **depend** on the equivalency, and also to be collocated with the choice from the equivalency. For...

...of the group is Offline. The CMFstate of a proxy TLR represents CMF for the **associated** resource group.
CMFstate up represents CMF = Online and CMFstate down represents CMF Offline. CMFstate dead...

...multiple nominalI 0 state-change events. This is followed by the usual reevaluation of the **allocations** for the island. Whenever an island containing an Online resource group is evaluated, special attention...in an RG fails to come up. Auxiliary solutions for gossamer up command failures are **limited** in resource groups by the collocation requirement of resource groups. Screening for collocation is done...

...for the same. When the event handler gets a graph event, it quickly identifies the **minimal** set of 1 5 islands that are affected by the event. The event handler leaves...

...queue that have not been blocked, and that affect any island in the above identified **minimal** set of islands. The **minimal** set of islands can expand each time another event is collected, and this increase can make **more** events become eligible to join the collection. Thus the **minimal** set of islands and collection of events increase recursively.'Regardless of clubbing, the identities of...This can lead to a new set of islands in place of the old set **associated** I 0 with the clubbed event. The input queue of the event handler is then...

...a clubbed event's shutdown. Instead, the special shutdown event should only bring down a **minimal** number of resources
43
needed for changing the problem graph - e.g. bring down only...

...suited to meet these requirements. A concurrent specification is naturally suited to Mounties and is **more** likely to yield a verifiably correct and robust implementation of the system. A simple and...

...in a pipelined manner. Such a specification however can suffer from two problems: (a) complexities **associated** with managing parallelism including state sharing and synchronization, and (b) inefficiency of fine-grained parallelism...

...cloned copies of the repository; flexibility and amenability to changes in functionality (e.cr., adding **more** Preprocessor smarts).
44
Efficient and Flexible Concurrent Programming
The paradi gm comprises of an approach...
...relatively short lived, dynamic, concurrent tasks wherein the tasks can be in-lined. In the **limit** of this approach. all of the tasks can be in-lined, resulting in a sequential...

...as follows. Each event from the event handler results in the creation of one or **more** tasks, to be picked by the one or **more** threads implementing Mounties, The tasks wait in an appropriate queue prior to being picked. In...

...to completion, without switching to another task. The task execution can result in one or **more** new tasks getting created, ...In this programming paradigrn, computation and communication are merged. Generally a task is a procedure **call** , with its arguments representing the communicated, inter-process, channel data from the CSP model. In general intermodule communication is carried out by task queues connecting the modules, wherein, the **scheduler** is given the charge of executing a task for a module by causing a thread...

...5 safety is guaranteed. The accompanying complexity of lock management and synchronization is straightforward. The **scheduling** of threads itself is done in a manner that avoids looping over input. Whenever a...
...art: IBM's HA/CMP, Nficrosoft's MSCS, Tivoli's AMS system, and Sun's **Jini** technology.
46
Application management middleware has traditionally been used for products that provide high availability such as IBM's HAICMP and Microsoft's Cluster Services (NISCS). HA/CMP's **application** management requires cluster resource configuration. Custom recovery scripts that are **programmed** separately for each cluster installation are needed. Making changes to the recovery scheme or to basic set of resource in the cluster requires these scripts to be re- **programmed** . Finally, HA/CMP recovery programs are stored and executed synchronously on all nodes of the cluster. MSCS provides a GUI-driven **application** manager across a two-node cluster with a single shared resource: a shared disk [see...

...and resource management is simplified with MSCS: there is only one resource to manage with **limited** management capabilities.
1 5
Tivoli offers an **Application** Management Specification (AMS) mechanism, which provides an ability to define and configure **applications** using the- Tivoli **Application** Response Measurement (ARM) API layer [see, Tivoli Corp., Tivoli and **Application** Management,
htti) ://www.tivole.com/products/documents/whiteoapersibodv
-maT)
--wr).html, 1999]. These **applications** are referred to as instrumented **applications** . The information gathered from the instrumented **applications** can be used to drive scripts by channeling the information through the Tivoli Event Console (TEC). The TEC can be configured to respond to specific **application** notification and initiate subsequent actions upon apRlication feedback. The current version of ARM **application** monitoring is from a single system's perspective. Future versions may include correlating events arrion...

...of these include Tspaces [see, P. Wyckoff, S. McLaughry, TI Lehman, and D. Ford, T **Spaces** , IBM Systems Journal, pp. 454-474,
47
vol. 37, 1998] and the **Jini** Technology [see, K. Edwards, Core JINI, The Sun Microsystems Press Java Series, 1999]. The TSpaces...

...can be used by other higher level services to manacre and coordinate resources in a **distributed** environment. **Jini** , on the other hand is a collection of services for dynamically acquiring and relinquishing services...

...mechanisms in Mounties do overlap in functionality with the similar services provided in TSpaces and **Jini** . Finally, there are several resource management systems for **distributed** environments with decision-making capabilities. Darwin is an example of such a system that performs resource **allocations** taking into account **application** requirements [see, P. 1 5 Chandra, A. Fisher, C. Kosak, E. Ng, P. Steenkiste, E...

...between Darwin and Mounties, Mounties provides a much richer set of abstractions for expressing complex **dependency**
information among resources. Also, the Mounties system is geared towards optimizing the **allocation** of services such that overall objectives are met; in Darwin the goal seems to be **more** geared towards optimizing the req uirements of an **application** or of a service. The Mounties services described here have some similarities with the Workj7ow ...for global cluster startup, resource failure and recovery, guarantees for quality-of-service, load-balance, **application** farm management, plugand-configure style of management for the cluster resources, and so on. The...

...modularity allows for substitution, at run-time, by alternate services including alternate decision making components. **Moreover** , the I 0 system is flexible enough to operate in a full auto pilot mode...

...changes in the system. Finally, it should be noted that the decision making capabilities and **associated** support services are general enough to be applied in other scenarios including in environments that are much **more** loosely coupled than clusters and that are highly **distributed** such those encountered in mobile and pervasive computing environments. In such environments, multiple independent decision...

...approach for on-line modeling and solution o f the global optimization problem using Evolutionary **algorithms** . These problems arise in the managing **distributed** resource using the decision support apparatus described earlier.

50

This aspect of the invention relates to the filed of **distributed** computing, and **more** particularly, to **allocation** various resource in the **distributed** computing environment. The resources need to be **allocated** to their **dependent** resources such that a gc@veri criterion is optimized.

Background

In a mission-critical semiautonomous...

...presence of unavailability of a subset of resources. Typically in complex systems, end user services **depend** oil multiple, lower level services and these in turn may **depend** on other lower level services. For example, web **servers** **depend** on database **servers** which in turn **depend** on lower level services such as 1/0 services, communication services, and even lower level services provided by the OS and the CPU. Together, these inter **dependencies** form a (directed acyclic)

de

'pendency or constraint garaph (CG) (refer Figure 1), where the vertices correspond to the individual services and the edge correspond to the **dependency** relationships. For a variety of reasons, complex systems invariably consist-of redundant services, that provide similar functionality. This results in resource **dependency** graphs with multiple choices in **allocating** a particular type of supporting resource or service. We refer to these multiple choices as...

...providing multiple choices for a particular type of service. Similarly, a service may appear in **more** than

5 1

one equivalency. Furthermore, multiple higher level

services

```
Set      Items     Description
S1       45744     OSGI OR OPEN()STANDARD()GATEWAY? OR HOME()AUDIO()VIDEO OR -
                   JAVA()NAMING(N)DIRECTOR? OR (HOUSEHOLD OR HOME)(N)(SERVER? OR
                   ROUTER? OR GATEWAY?) OR STB OR JINI OR HAVI OR UPNP OR HOMERF
                   OR SMARTHOUSE OR HOME()RF OR NETWORKED(3N)INTERNET()APPLIANCES
S2       13085894  MEMOR? OR SPACE? OR STORAGE? OR RAM OR SRAM OR ROM OR SDRAM
                   OR RESOURCE?
S3       404938    S2(3N)(ALLOCAT? OR DISBURS? OR DISTRIBUT? OR RESERV? OR SC-
                   HEDUL?)
S4       469151    (DEPEND? OR ASSOCIAT? OR LINK? OR BUNDL?)(3N)(SERVICE()INS-
                   TANCE? OR PROGRAM? OR APPLICATION? OR CALL OR DEMAND?)
S5       1224      S4(5N)(FEWEST OR LOWEST OR MINIMAL OR SMALLEST OR LEAST)
S6       24044     S4(5N)(GREATEST OR MOST OR MORE OR THRESHOLD? OR BENCHMARK?
                   OR LIMIT?)
S7       581301    S2(3N)(EXCEED? OR MORE? OR TOO()MUCH? OR OVERSUBSCRIB? OR -
                   OVERWHELM?)
S8       19005     S3(S)(ALGORITHM? OR FORMULA? OR TABLE? OR CALCULAT? OR MAT-
                   RIX?)
S9       2503      S1(3N)(MANAGE? OR CONTROL? OR ADMINIST? OR MONITOR?)
S10      19088     S3(S)(S5 OR S6 OR S7)
S11      118       S8(S)(S4 OR S5)
S12      4         S3(10N)(S5 OR S6 OR S7)(10N)S1
S13      0         S11(S)S1
S14      8         S9(S)S3
S15      3         S10(10N)S1
S16      4         S1(10N)S3(10N)(S5 OR S6 OR S7)
S17      54        S1(10N)S3
S18      8         S12 OR S12 OR S14 OR S15 OR S16
S19      58        S17 OR S18
S20      30        RD (unique items)
S21      25        S20 NOT PY>2002
S22      25        S21 NOT PD>20021201
File 275:Gale Group Computer DB(TM) 1983-2005/May 05
         (c) 2005 The Gale Group
File  47:Gale Group Magazine DB(TM) 1959-2005/May 05
         (c) 2005 The Gale group
File  75:TGG Management Contents(R) 86-2005/Apr W4
         (c) 2005 The Gale Group
File 636:Gale Group Newsletter DB(TM) 1987-2005/May 05
         (c) 2005 The Gale Group
File  16:Gale Group PROMT(R) 1990-2005/May 04
         (c) 2005 The Gale Group
File 624:McGraw-Hill Publications 1985-2005/May 04
         (c) 2005 McGraw-Hill Co. Inc
File 484:Periodical Abs Plustext 1986-2005/May W1
         (c) 2005 ProQuest
File 613:PR Newswire 1999-2005/May 05
         (c) 2005 PR Newswire Association Inc
File 813:PR Newswire 1987-1999/Apr 30
         (c) 1999 PR Newswire Association Inc
File 141:Readers Guide 1983-2005/Dec
         (c) 2005 The HW Wilson Co
File 239:Mathsci 1940-2005/Jun
         (c) 2005 American Mathematical Society
File 370:Science 1996-1999/Jul W3
         (c) 1999 AAAS
File 696:DIALOG Telecom. Newsletters 1995-2005/May 04
         (c) 2005 The Dialog Corp.
File 553:Wilson Bus. Abs. FullText 1982-2004/Dec
         (c) 2005 The HW Wilson Co
File 621:Gale Group New Prod.Annou.(R) 1985-2005/May 05
         (c) 2005 The Gale Group
File 674:Computer News Fulltext 1989-2005/May W1
         (c) 2005 IDG Communications
```

```
File  88:Gale Group Business A.R.T.S. 1976-2005/May 04
        (c) 2005 The Gale Group
File 369:New Scientist 1994-2005/Apr W1
        (c) 2005 Reed Business Information Ltd.
File 160:Gale Group PROMT(R) 1972-1989
        (c) 1999 The Gale Group
File 635:Business Dateline(R) 1985-2005/May 03
        (c) 2005 ProQuest Info&Learning
File  15:ABI/Inform(R) 1971-2005/May 04
        (c) 2005 ProQuest Info&Learning
File   9:Business & Industry(R) Jul/1994-2005/Apr 28
        (c) 2005  The Gale Group
File  13:BAMP 2005/Apr W4
        (c) 2005  The Gale Group
File 810:Business Wire 1986-1999/Feb 28
        (c) 1999 Business Wire
File 610:Business Wire 1999-2005/May 05
        (c) 2005 Business Wire.
File 647:CMP  Computer Fulltext 1988-2005/Apr W3
        (c) 2005 CMP Media, LLC
File  98:General Sci Abs/Full-Text 1984-2004/Dec
        (c) 2005 The HW Wilson Co.
File 148:Gale Group Trade & Industry DB 1976-2005/May 05
        (c)2005 The Gale Group
File 634:San Jose Mercury  Jun 1985-2005/May 04
        (c) 2005 San Jose Mercury News
```

22/3,K/9   (Item 4 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)

06175036   Supplier Number: 54034997   (USE FORMAT 7 FOR FULLTEXT)
Sun Promises Easier Networking.(Technology Information)
Karpinski, Richard
InformationWeek, p36(1)
Feb 1, 1999
Language: English   Record Type: Fulltext
Document Type: Magazine/Journal; Tabloid; General Trade
Word Count: 230

...   Associates and ObjectSpace are building application environments
that make use of a key concept in **Jini** : **distributed** virtual **memory**
spaces , where objects are stored and accessed as services by devices and
other objects.
        "The Jini...

01231892   CMP ACCESSION NUMBER: EET20010219S0079
FPGAs don remote reprogram habits
Login Harris, Contract Engineer, David Atkisson, Senior Software Engineer,
    emWare Inc., Salt Lake City, Utah
ELECTRONIC ENGINEERING TIMES, 2001, n 1154, PG100
PUBLICATION DATE: 010219
JOURNAL CODE: EET   LANGUAGE: English
RECORD TYPE: Fulltext
SECTION HEADING: EMBEDDED SYSTEMS - FOCUS: PROGRAMMABLE LOGIC
WORD COUNT: 1211

...   they can be interoperable with device object networking strategies
such as Universal Plug and Play, **Jini** and **OSGi** . And device **resources**
can be **distributed** to the gateway by taking over device file system
management, server capabilities, common object proxies...

```
Set      Items    Description
S1        4291    OSGI OR OPEN()STANDARD()GATEWAY? OR HOME()AUDIO()VIDEO OR -
                  JAVA()NAMING(N)DIRECTOR? OR (HOUSEHOLD OR HOME)(N)(SERVER? OR
                  ROUTER? OR GATEWAY?) OR STB OR JINI OR HAVI OR UPNP OR HOMERF
                  OR SMARTHOUSE OR HOME()RF OR NETWORKED(3N)INTERNET()APPLIANCES
S2     4616199    MEMOR? OR SPACE? OR STORAGE? OR RAM OR SRAM OR ROM OR SDRAM
                  OR RESOURCE?
S3     6145531    ALLOCAT? OR DISBURS? OR DISTRIBUT? OR RESERV? OR SCHEDUL?
S4     8731986    DEPEND? OR ASSOCIAT? OR LINK? OR BUNDLE?
S5     8429049    SERVICE()INSTANCE? OR PROGRAM? OR APPLICATION? OR CALL OR -
                  DEMAND?
S6     1621141    FEWEST OR LOWEST OR MINIMAL OR SMALLEST OR LEAST
S7     9712823    GREATEST OR MOST OR MORE OR THRESHOLD? OR BENCHMARK? OR LI-
                  MIT?
S8     5348940    EXCEED? OR MORE? OR TOO()MUCH? OR OVERSUBSCRIB? OR OVERWHE-
                  LM?
S9     7517861    ALGORITHM? OR FORMULA? OR TABLE? OR CALCULAT? OR MATRIX?
S10         89    S1 AND S2(2N)S3
S11          4    S1  AND (S2 OR S3)  AND S4(3N)S5
S12     128385    S2  AND S8  AND S9
S13         17    S1  AND S12
S14        101    S2 (S) S3 (S) S4 (S) S5 (S) S6 (S) S7 (S) S8 (S) S9
S15      89105    S4  AND S5  AND (S7 OR S8)  AND S9
S16       1319    S15  AND (GATEWAY? OR SERVER? OR ROUTER?)
S17        117    S4(3N)S5  AND S16
S18          4    S14  AND (S1 OR GATEWAY? OR SERVER? OR ROUTER?)
S19        192    S1(3N)(MANAGE? OR CONTROL? OR ADMINIST? OR MONITOR?)
S20          0    S19 AND S14
S21          1    S10 AND S11
S22          4    S14 AND S16
S23          0    S18 AND S19
S24         18    S1(5N)S2(3N)S3
S25         74    S10 AND (S4 OR S5 OR S6 OR S7 OR S8)
S26         23    S10 AND S9
S27     866689    (S6 OR S7 OR S8) AND (S4 OR S5) AND S9
S28          7    S10 AND S27
S29         55    S11 OR S13 OR S18 OR S21 OR S22 OR S24 OR S26 OR S28
S30          6    S19 AND S10
S31         58    S29 OR S30
S32         44    RD (unique items)
S33         27    S32 NOT PY>2002
File    8:Ei Compendex(R) 1970-2005/Apr W4
           (c) 2005 Elsevier Eng.  Info. Inc.
File   35:Dissertation Abs Online 1861-2005/Mar
           (c) 2005 ProQuest Info&Learning
File   65:Inside Conferences 1993-2005/May W1
           (c) 2005 BLDSC all rts. reserv.
File    2:INSPEC 1969-2005/Apr W4
           (c) 2005 Institution of Electrical Engineers
File   94:JICST-EPlus 1985-2005/Mar W3
           (c)2005 Japan Science and Tech Corp(JST)
File  111:TGG Natl.Newspaper Index(SM) 1979-2005/May 03
           (c) 2005 The Gale Group
File    6:NTIS 1964-2005/Apr W4
           (c) 2005 NTIS, Intl Cpyrght All Rights Res
File  144:Pascal 1973-2005/Apr W4
           (c) 2005 INIST/CNRS
File   34:SciSearch(R) Cited Ref Sci 1990-2005/Apr W4
           (c) 2005 Inst for Sci Info
File   99:Wilson Appl. Sci & Tech Abs 1983-2005/Apr
           (c) 2005 The HW Wilson Co.
File   95:TEME-Technology & Management 1989-2005/Mar W4
           (c) 2005 FIZ TECHNIK
```

07071779   E.I. No: EIP04438416233
  Title: Design of a new chip architecture for a home   gateway
  Author: Choi, Kwang-Soon; Jung, Kwang-Mo; Yoon, Myung-Hyun
  Corporate Source: High Speed Network Research Center Korea Electron.
Technology Institute, Seongnam-Si, Kyunggi-Do, 463-771, South Korea
  Source: Advances in Communications and Software Technologies Advances in
Communications and Software Technologies 2002. p 83-88
  Publication Year: 2002
  ISBN: 9608052718
  Language: English
  Document Type: JA; (Journal Article)   Treatment: T; (Theoretical)
  Journal Announcement: 0410W4
  Abstract: As Internet is becoming popular to everyone recently, demands
for higher-quality services such as VOD and home networking have been
increasing. Especially, home networking system can interconnect and
control home appliances which use different protocols via Internet. This
means that a common protocol to communicate with each other and a new
system architecture to implement the common protocol are needed. In this
paper, we propose a common protocol and a novel chip architecture with a
memory **management** scheme for a **home   gateway** system. 9 Refs.
  Descriptors: *Gateways (computer networks); Microprocessor chips;
Computer architecture; Quality of service; Network protocols; **Storage
allocation** (computer); Internet; Modems; Data transfer; Local area
networks; Packet networks; Scheduling; **Algorithms**
  Identifiers: Common protocols; Packet conversion; **Home   gateway ;   Home**
network; Shared memory
  Classification Codes:
  714.2 (Semiconductor Devices & Integrated Circuits); 722.1 (Data
Storage, Equipment & Techniques); 718.1 (Telephone Systems & Equipment);
723.2 (Data Processing); 912.2 (Management)
  716 (Electronic Equipment, Radar, Radio & Television); 714 (Electronic
Components & Tubes); 722 (Computer Hardware); 723 (Computer Software,
Data Handling & Applications); 718 (Telephone & Other Line Communications)
; 912 (Industrial Engineering & Management)
  71 (ELECTRONICS & COMMUNICATION ENGINEERING); 72 (COMPUTERS & DATA
PROCESSING); 91 (ENGINEERING MANAGEMENT)

06238732   E.I. No: EIP02517277844
   Title: ICENI: Optimisation of component applications within a Grid environment
   Author: Furmento, Nathalie; Mayer, Anthony; McGough, Stephen; Newhouse, Steven; Field, Tony; Darlington, John
   Corporate   Source: London   e-Science   Centre   Imp.   Coll.   of   Sci., Technology/Med., London SW7 2BZ, United Kingdom
   Source: Parallel Computing v 28 n 12 December 2002. p 1753-1772
   Publication Year: 2002
   CODEN: PACOEJ   ISSN: 0167-8191
   Language: English
   Document Type: JA; (Journal Article)   Treatment: A; (Applications); T; (Theoretical)
   Journal Announcement: 0212W4
   Abstract: Effective exploitation of Computational Grids can only be achieved when applications are fully integrated with the Grid middleware and the underlying computational resources. Fundamental to this exploitation is information. Information about the structure and behaviour of the application, the capability of the computational and networking resources, and the availability and access to these resources by an individual, a group or an organisation. In this paper we describe Imperial College e-Science Networked Infrastructure (ICENI), a Grid middleware framework developed within the London e-Science Centre. ICENI is a platform-independent framework that uses open and extensible XML derived protocols, within a framework built using Java and **Jini** , to explore effective application execution upon **distributed** federated **resources** . We match a high-level application specification, defined as a network of components, to an optimal combination of the currently available component implementations within our Grid environment, by using composite performance models. We demonstrate the effectiveness of this architecture through the high-level specification and solution of a set of linear equations by automatic and selection of optimal resources and implementations. copy 2002 Elsevier Science B.V. All rights reserved. 31 Refs.
   Descriptors: *Computer architecture; Middleware; Network protocols; XML; Distributed computer systems; Java programming language; Linear equations
   Identifiers: Computational grids
   Classification Codes:
   723.1.1 (Computer Programming Languages)
   723.1 (Computer Programming); 722.4 (Digital Computers & Systems)
   722 (Computer Hardware); 723 (Computer Software, Data Handling & Applications); 921 (Applied Mathematics)
   72 (COMPUTERS & DATA PROCESSING); 92 (ENGINEERING MATHEMATICS)

05423344   E.I. No: EIP99114893980
   Title: Home network file system for home network based on IEEE-1394 technology
   Author: Igarashi, Tatsuya; Hayakawa, Koichi; Nishimura, Takuya; Ozawa, Takeshi; Takizuka, Hiroshi
   Corporate Source: Sony Corp, Tokyo, Jpn
   Conference Title: Proceedings of the 1999 IEEE International Conference on Consumer Electronics, ICCE'99
   Conference Location: Los Angeles, CA, USA Conference Date: 19990622-19990624
   E.I. Conference No.: 55511
   Source: Digest of Technical Papers - IEEE International Conference on Consumer Electronics 1999. p 150-151
   Publication Year: 1999
   CODEN: DTPEEL   ISSN: 0747-668X
   Language: English
   Document Type: JA; (Journal Article)   Treatment: A; (Applications)
   Journal Announcement: 0001W2
   Abstract: This paper proposes a network file system for home network based on IEEE-1394 technology. Home Network File System enables real-time playback, recording of audio/video file and file sharing for **HAVi** (**Home Audio Video** interoperability) compliant consumer devices. (Author abstract) 3 Refs.
   Descriptors: *Computer networks; Real time systems; Asynchronous transfer mode; Data transfer; Bandwidth; Image compression; Image coding; **Resource allocation** ; **Calculations**
   Identifiers: Home network file system; **Home audio video** interoperability; File **management** ; File sharing
   Classification Codes:
   722.4 (Digital Computers & Systems); 723.2 (Data Processing); 921.6 (Numerical Methods)
   722 (Computer Hardware); 723 (Computer Software); 921 (Applied Mathematics)
   72 (COMPUTERS & DATA PROCESSING); 92 (ENGINEERING MATHEMATICS)

04986869   E.I. No: EIP98044152211
   Title: Television home server **for integrated services - toward the
realization of ISDB `anytime' services**
   Author: Kurioka, Tatsuya; Minami, Hiroki; Okuda, Haruo; Numazawa, Junji;
Yanagimachi, Akio; Ohshima, Hideo
   Corporate Source: NHK Science and Technical Research Lab, Tokyo, Jpn
   Conference Title: Proceedings of the 1997 IEEE International Symposium on
Consumer Electronics, ISCE'97
   Conference   Location: Singapore,   Singapore   Conference   Date:
19971202-19971204
   Sponsor: IEEE
   E.I. Conference No.: 48204
   Source: Proceedings of the IEEE International Symposium on Consumer
Electronics, ISCE 1997. IEEE, Piscataway, NJ, USA,97TH8348. p 250-253
   Publication Year: 1997
   CODEN: 002828
   Language: English
   Document Type: CA; (Conference Article)   Treatment: G; (General Review)
   Journal Announcement: 9805W4
   Abstract: In the age of digital multimedia, demand is bound to rise for a
television **Home Server** for integrated services which automatically
records favorite programs so that users can watch them anytime. We have
developed a hierarchical storage management system (HSMS) as the
architecture for the development of a high-speed **Home Server** with very
large capacity. This paper first describes the required specifications and
memory constructions of the **Home Server** and then proposes a model of
new HSMS. Also described is its element technologies and an experimental
Home Server system, and the results of the experiment we conducted to
test its performance. (Author abstract) 3 Refs.
   Descriptors: *Voice/data communication systems; Television broadcasting;
Hierarchical systems; **Storage allocation** (computer); Computer
architecture
   Identifiers: Hierarchical storage **management** system (HSMS); Television
home server ; Integrated services digital broadcasting (ISDB)
   Classification Codes:
   716.3 (Radio Systems & Equipment); 722.1 (Data Storage, Equipment &
Techniques); 716.4 (Television Systems & Equipment)
   716 (Radar, Radio & TV Electronic Equipment); 722 (Computer Hardware);
723 (Computer Software)
   71 (ELECTRONICS & COMMUNICATIONS); 72 (COMPUTERS & DATA PROCESSING)

01778917 ORDER NO: AADAA-I9993079
A cost-benefit approach to resource   allocation **in scalable
metacomputers**

     A *metacomputer* is a set of machines networked
together for increased computational performance. To build an efficient
metacomputer, one must assign jobs to the various networked machines
intelligently. A poor job assignment strategy can result in heavily
unbalanced loads and thrashing machines. This cripples the cluster's
computational power. A strong job assignment strategy helps a metacomputer
complete all of its jobs swiftly.
     Resource heterogeneity makes job assignment **more** complex. Placing
a job on one machine might risk depleting its small **memory** . Another
machine might have **more** free **memory** but a heavily burdened CPU.
Bin packing on **memory** protects the system against
thrashing. *Load balancing* protects the system against high
CPU loads. Combining the two approaches, however, gives an *ad
hoc* heuristic **algorithm** with no clear theoretical merit.
     The **Cost-Benefit Framework**, developed in this work,
offers a new approach to job assignment on metacomputers. It smoothly
handles heterogeneous **resources** by converting them into a unitless cost.
We assign (and possibly reassign) jobs to greedily minimize this cost.
     This approach gives us an online strategy provably competitive with
the optimal offline **algorithm** in the maximum usage of each **resource** . It
has a weak competitive ratio—logarithmic in the number of machines in
the cluster—but even this weak ratio is unprecedented in the
literature. No other known method offers any competitive guarantee on **more**
than one **resource** .
     We present experimental evidence that this strategy performs extremely
well in practice, comparing it to two important benchmarks: the default
round robin strategy of the popular PVM metacomputing system, and the
powerful adaptive strategy of the Mosix system.
     Metacomputing environments are not homogeneous. In some environments,
the scheduler has a great deal of information about submitted jobs. In
other cases, it has very little. Some systems can migrate jobs without
interrupting their execution. Others cannot. We develop variants of the
basic "opportunity cost" strategy of the Cost-Benefit Framework
for various metacomputing environments, and prove all of them highly
efficient.
     Finally, we provide two metacomputing systems—a prototype and a
complete system—based on these ideas. The Java Market prototype is a
metacomputer built atop Java and web technologies, able to integrate any
consenting Internet-connected machine. The Frugal System transforms any
Jini network into a metacomputer.

```
Set     Items   Description
S1         92   OSGI OR OPEN()STANDARD()GATEWAY? OR HOME()AUDIO()VIDEO OR -
                JAVA()NAMING(N)DIRECTOR? OR (HOUSEHOLD OR HOME)(N)(SERVER? OR
                ROUTER? OR GATEWAY?) OR STB OR JINI OR HAVI OR UPNP OR HOMERF
                OR SMARTHOUSE OR HOME()RF OR NETWORKED(3N)INTERNET()APPLIANCES
S2      13079   MEMOR? OR SPACE? OR STORAGE? OR RAM OR SRAM OR ROM OR SDRAM
                OR RESOURCE?
S3        524   S2(3N)(ALLOCAT? OR DISBURS? OR DISTRIBUT? OR RESERV? OR SC-
                HEDUL?)
S4        819   (DEPEND? OR ASSOCIAT? OR LINK? OR BUNDL?)(3N)(SERVICE()INS-
                TANCE? OR PROGRAM? OR APPLICATION? OR CALL OR DEMAND?)
S5          0   S4(5N)(FEWEST OR LOWEST OR MINIMAL OR SMALLEST OR LEAST)
S6         39   S4(5N)(GREATEST OR MOST OR MORE OR THRESHOLD? OR BENCHMARK?
                OR LIMIT?)
S7        467   S2(3N)(EXCEED? OR MORE? OR TOO()MUCH? OR OVERSUBSCRIB? OR -
                OVERWHELM?)
S8         38   S3(S)(ALGORITHM? OR FORMULA? OR TABLE? OR CALCULAT? OR MAT-
                RIX?)
S9          5   S1(3N)(MANAGE? OR CONTROL? OR ADMINIST? OR MONITOR?)
S10        11   S2 AND S3 AND S4
S11        16   S9 OR S10
S12         0   S8 AND S1
S13        16   S11 NOT PY>2002
File 256:TecInfoSource 82-2005/Mar
          (c) 2005 Info.Sources Inc
```

01103322   DOCUMENT TYPE: Product

PRODUCT NAME: ILOG CPLEX (103322)

ILOG Inc (546291)
1080 Linda Vista Ave
Mountain View, CA   94043   United States
TELEPHONE: (650) 567-8000

RECORD TYPE: Directory

CONTACT: Sales Department

REVISION DATE: 20030617

...ILOG CPLEX is a mathematical programming optimizer that solves linear,
mixed integer, and quadratic problems **associated** with **resource
allocation   applications** . The product can help streamline supply chain
planning, telecommunication network design, and transportation system
design...

13/3,K/5
DIALOG(R)File 256:TecInfoSource

00149838   ·   DOCUMENT TYPE: Review

PRODUCT NAMES: Microsoft Automated Deployment Services   (183474)

**TITLE: Utility computing plans take shape: Microsoft begins to flesh
out....**
AUTHOR: Fontana, John
SOURCE: Network World,   v20 n36   p1(2) Sep 8, 2003
ISSN: 0887-7661
HOMEPAGE: · http://www.nwfusion.com

RECORD TYPE: Review
REVIEW TYPE: Product Analysis
GRADE: Product Analysis, No Rating

REVISION DATE: 20040130

...elaborate strategies for creating management environments that allow
systems to adapt to changes via dynamic **resource   allocation** and
software installation. A spokesperson for Rackspace says ADS is only a tiny
portion of...
...tools to allow the three types of code to intercommunicate regarding
management and to comprehend **dependencies** among **applications** , hardware,
and network capacity for the best system operation.

DESCRIPTORS: Computer **Resource** Management; Data Center Operations; ⌐
    Network Software; Operating Systems; WANs; Windows NT/2000; Windows
    Server 2003

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Set      Items    Description
S1         240    AU=(KAMEL I? OR KAMEL, I?)
S2          52    AU=(ELBASSIONI K? OR ELBASSIONI, K?)
S3       10257    AU=(CHEN B? OR CHEN, B?)
S4           3    S1 AND S2 AND S3
S5          75    (S1 OR S2 OR S3) AND (GATEWAY? OR SERVER? OR ROUTER? OR FI-
                  LESERVER?)
S6          21    S5 AND (MEMOR? OR SPACE? OR STORAGE? OR GIGAB? OR GIG OR G-
                  IGS OR RAM OR SRAM)
S7          24    S4 OR S6
S8          19    RD (unique items)
S9          15    S8 NOT PY>2002
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           (c) 2005  The Gale Group
File   148:Gale Group Trade & Industry DB 1976-2005/May 03
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7360342   INSPEC Abstract Number: B2002-10-6210L-033, C2002-10-5620W-026
 Title: Bundles replacement in gateways
  Author(s): Beizhong Chen; **Elbassioni, K.** ; **Kamel, I.**
  Author Affiliation: Dept. of Electr. & Comput. Eng., Rutgers Univ., Piscataway, NJ, USA
  Conference Title: Wireless LANs and Home Networks Connecting Offices and Homes. Proceedings of the International Conference on Wireless LANS and Home Networks   p.79-88
  Editor(s): Bing, B.
  Publisher: World Scientific, Singapore
  Publication Date: 2001 Country of Publication: Singapore   xv+360 pp.
  ISBN: 981 02 4826 1   Material Identity Number: XX-2002-00164
  Conference Title: Proceedings of International Conference on Wireless LANS and Home Networks
  Conference Sponsor: IEEE
  Conference Date: 5-7 Dec. 2001   Conference Location: Singapore
  Language: English   Document Type: Conference Paper (PA)
  Treatment: Theoretical (T); Experimental (X)

  Abstract: This paper studies how to manage limited **memory** available in home **gateways** like STB. In the OSGi model, services are implemented in software bundles that can be downloaded separately from the Internet and executed in the **gateway** . OSGi specifications define a service dependency scheme that maps the relationship between services. The problem we solve is: when the **memory** is full, which service(s) will be stopped or kicked out of **memory** to start a new service. Note that stopping a given service means that we stop all the services that depend on it. Our goal is to minimize the total number of stopped services. Because of the service dependencies, traditional **memory** management techniques, such as LRU, best fit, first fit, worst fit are not suitable. This paper presents an optimal algorithm for the above service replacement problem. We also present a more efficient heuristic in terms of **memory** and running time. Preliminary experimental results are presented to evaluate the performance of the proposed algorithms. (11 Refs)
  Subfile: B C
  Descriptors: Internet; internetworking; open systems; performance evaluation; **storage** management
  Identifiers: home **gateways** ; STB; optimal algorithm; service replacement ; performance evaluation; OSGi model; Internet; software bundles; service dependency scheme; stopped services; **memory** management
  Class Codes: B6210L (Computer communications); C5620W (Other computer networks); C5670 (Network performance); C6150N (Distributed systems software); C6120 (File organisation)
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7320977   INSPEC Abstract Number: B2002-08-6150M-164, C2002-08-5640-112
 Title: Efficient service management in home gateway
  Author(s): **Elbassioni, K.** ; Beizhong Chen; **Kamel, I.**
  Author Affiliation: Panasonic Inf. & Networking Tech. Lab., Princeton,
NJ, USA
  Conference Title: Proceedings 2002   IEEE 4th International Workshop on
Networked Appliances (Cat. No.02EX525)   p.225-33
  Editor(s): Mink, A.
  Publisher: IEEE, Piscataway, NJ, USA
  Publication Date: 2002 Country of Publication: USA   viii+284 pp.
  ISBN: 0 7803 7259 X   Material Identity Number: XX-2002-00242
  Conference Title: Proceedings 2002 IEEE 4th International Workshop on
Networked Appliances
  Conference Sponsor: Multimedia Commun. Tech. Committee of the IEEE
Commun. Soc.; U.S. Dept. Commerce Technol. Admin.; NIST
  Conference Date: 15-16 Jan. 2002   Conference Location: Gaithersburg,
MD, USA
  Language: English   Document Type: Conference Paper (PA)
  Treatment: Practical (P)

  Abstract: In   this paper, we present two algorithms for service
replacement in home **gateways** .. The algorithms take into consideration the
priority value and dependencies in addition to the amount of **memory**
occupied by each service. One algorithm uses dynamic programming techniques
and gives an optimal solution for the above service replacement problem.
However, this algorithm might require non-trivial CPU and **memory**
resources. The second algorithm is based on heuristics and requires less
time and **space** than the first one. We carry. simulation experiments to
evaluate the effectiveness of our proposals and compare the performance
between the two suggested algorithms.   (11 Refs)
  Subfile: B C
  Descriptors: computer network management; dynamic programming; LAN
interconnection; **memory** protocols; performance evaluation;
telecommunication services
  Identifiers: service replacement; home **gateways** ; priority value;
memory ; dynamic programming; optimal solution; heuristics; simulation;
performance; service management
  Class Codes: B6150M (Protocols); B6210L (Computer communications); B6210C
(Network management); B0260 (Optimisation techniques); C5640 (Protocols);
C5620L (Local area networks); C1180 (Optimisation techniques); C5670 (
Network performance)
  Copyright 2002, IEE

9/5/9   (Item 9 from file: 2)
DIALOG(R)File   2:INSPEC
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6338488   INSPEC Abstract Number: B1999-10-6430G-013, C1999-10-6160M-008
   Title: **A study on scheduling multiple priority requests in multimedia**
servers
   Author(s): **Kamel, I.** ; Niranjan, T.
   Author Affiliation: Panasonic Inf. & Networking Technol. Lab., Princeton,
NJ, USA
   Conference Title: Proceedings IEEE International Conference on Multimedia
Computing and Systems   Part vol.2   p.395-9 vol.2
   Publisher: IEEE Comput. Soc, Los Alamitos, CA, USA
   Publication   Date: 1999 Country   of   Publication: USA   2 vol.
(xlix+909+1127) pp.
   ISBN: 0 7695 0253 9   Material Identity Number: XX-1999-02047
   U.S. Copyright Clearance Center Code: 0 7695 0253 9/99/$10.00
   Conference   Title: Proceedings   of ICMCS99: IEEE Multimedia Systems '99:
International Conference on Multimedia Computing and Systems
   Conference Sponsor: IEEE Comput. Soc.; IEEE Circuit & Syst. Soc.; IEEE
Commun. Soc.; IEEE Signal Process. Soc
   Conference Date: 7-11 June 1999   Conference Location: Florence, Italy
   Language: English   Document Type: Conference Paper (PA)
   Treatment: Practical (P)
   Abstract: Multimedia   **servers**   store a large amount of media data of
different   format.   Different data objects have different real time
requirements. We present an empirical study on the performance of disk
scheduling in the presence of different media types with different real
time requirements. We also argue that using multiple queues to handle
different data types is not the best way to handle objects with different
priorities. Moreover we argue that using one queue per disk to organize
objects with different real time requirements would be more suitable for
multimedia   **server**   applications. We built a simulation model based on a
real video **server** , PanaViss, produced by Panasonic. The experiments show
that using multiple queues respects the priority hierarchy. However, this
schema sometimes penalizes utilization of the disk. (15 Refs)
   Subfile: B C
   Descriptors: disc **storage** ; multimedia **servers** ; real-time systems;
scheduling
   Identifiers: multiple priority request scheduling; multimedia **servers** ;
media data; data objects; real time requirements; disk scheduling; media
types; multiple queues; data types; simulation model; real video **server** ;
PanaViss; Panasonic; priority hierarchy
   Class Codes: B6430G (Video on demand and video servers); C6160M (
Multimedia databases); C5260D (Video signal processing); C6150N (
Distributed systems software); C5320 (Digital storage)